

B39

## PATENT ABSTRACTS OF JAPAN

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(21)Application number : 06-198881 (71)Applicant : ASICS CORP  
(22)Date of filing : 24.08.1994 (72)Inventor : HASHIMOTO SUSUMU

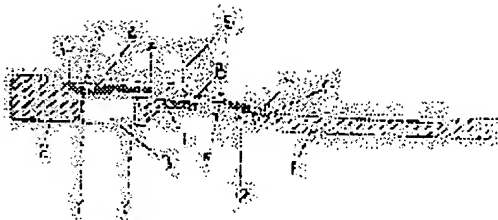
## (54) VENTILATABLE SHOE SOLE

## (57)Abstract:

PURPOSE: To provide a shoe sole which can prevent effectively a foot from going stinking by taking efficiently outer air into the inside of a shoe instep cover from the heel portion of a shoe.

CONSTITUTION: This sole consists of a shoe sole main body 1 provided with one or plural penetration holes 3 at a heel portion 2; and a slablike member 4 covering the upper surface side of the penetration holes 3, and the slablike member 4 is provided with one or plural grooves 5 on its lower surface 12 side and through-holes 6 at the longitudinal middle portions of the grooves

5. When the slablike member 4 is mounted on the penetration holes 3 of the shoe sole main body 1, arrangement is made by shifting the openings X-X of the through-holes 6 of the slablike member 4 and the upper portion openings Y-Y of the penetration holes 3 of the shoe sole main body 1 in forward and backward directions, and an air flow passage 8 to be bypassed to the joining portions of the penetration holes 3 of the heel portion 2 and the grooves 5 of the slablike member 4 is formed.



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registration]  
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PRIOR ART

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[Description of the Prior Art] In recent years, since gentleman shoes are shoes regularly used in commutation and attending school, it increases as a demand of a consumer that it does not get tired even if it carries out the object for \*\*\*\*\* of the fashionability from the first, and that it is easy to wear, therefore the functional side of lightweight nature and cushioning properties comes to be thought as important, and the sole excellent in lightweight nature and cushioning properties made of synthetic resin has come to be adopted from the conventional comparatively heavy sole made from natural leather. [0003] However, the demerit in which the outstanding permeability which natural leather has is missing actualizes to the sole made of synthetic resin, and it is becoming it with a bigger theme how the problem of permeability is newly conquered. In order to give permeability to the sole made of this synthetic resin, the applicant was also diligent in researches and developments, and has made various proposals. For example, an applicant's JP,6-141906,A is it. By the starting well-known example, while preparing a through tube in the heel of a sole body, the depression meeting last is established in the top-face side of a sole body. Wrap metal or the network sheet made of synthetic resin is laid for said through tube in the lower order stepped part formed in the depression. Furthermore, an opening layer is formed in the top face of this network sheet with the dashboard made of elastic mesh material or synthetic resin, the electric shielding sheet which drilled opening in the top face of this opening layer is prepared, and it has a solid mesh made from that upper synthetic fiber.

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TECHNICAL FIELD

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[Industrial Application] This invention starts amelioration of the sole which has permeability, and in more detail, the open air tends to be efficiently adopted in a shoes upper from a heel, and it is going to offer the structure where a fresh air can always circulate in a shoes upper, and the sole which can use nothing and MURE prevention of a guide peg effectively.

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] However, conventionally starting, since the aeration member of a large number, such as an electric shielding sheet, was needed for the network sheet as equipment to which aeration is urged, and an elastic mesh material list in elegance, the production process became complicated, time and effort was taken, the manufacturing cost was skyrocketed, and it was not the thing which can never be satisfied also in design -- moreover, network-TO is discovered from the exterior of a sole.

[0005] Therefore, this invention makes it a technical technical problem to offer the sole which can acquire the effective aeration effectiveness by the simplest possible production process.

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EFFECT OF THE INVENTION

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[Effect of the Invention] Therefore, according to this invention, since the open air can be adopted effective in the interior of shoes and MURE in a shoes upper can be prevented by the airstream path formed by the through tube prepared in the heel, the depression established in plate-like part material, and the bore, without allowing permeation of a foreign matter, it is the the best for the gentleman shoes which have a sole made of synthetic resin.

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[Translation done.]

[Patent number] 3048850  
[Date of registration] 24.03.2000  
[Number of appeal against examiner's  
decision of rejection]  
[Date of requesting appeal against  
examiner's decision of rejection]  
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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention starts amelioration of the sole which has permeability, and in more detail, the open air tends to be efficiently adopted in a shoes upper from a heel, and it is going to offer the structure where a fresh air can always circulate in a shoes upper, and the sole which can use nothing and MURE prevention of a guide peg effectively.

[0002]

[Description of the Prior Art] In recent years, since gentleman shoes are shoes regularly used in commutation and attending school, it increases as a demand of a consumer that it does not get tired even if it carries out the object for \*\*\*\*\* of the fashionability from the first, and that it is easy to wear, therefore the functional side of lightweight nature and cushioning properties comes to be thought as important, and the sole excellent in lightweight nature and cushioning properties made of synthetic resin has come to be adopted from the conventional comparatively heavy sole made from natural leather.

[0003] However, the demerit in which the outstanding permeability which natural leather has is missing actualizes to the sole made of synthetic resin, and it is becoming it with a bigger theme how the problem of permeability is newly conquered. In order to give permeability to the sole made of this synthetic resin, the applicant was also diligent in researches and developments, and has made various proposals. For example, an applicant's JP,6-141906,A is it. By the starting well-known example, while preparing a through tube in the heel of a sole body, the depression meeting last is established in the top-face side of a sole body. Wrap metal or the network sheet made of synthetic resin is laid for said through tube in the lower order stepped part formed in the depression. Furthermore, an opening layer is formed in the top face of this network sheet with the dashboard made of elastic mesh material or synthetic resin, the electric shielding sheet which drilled opening in the top face of this opening layer is prepared, and it has a solid mesh made from that upper synthetic fiber.

[0004]

[Problem(s) to be Solved by the Invention] However, conventionally starting, since the aeration member of a large number, such as an electric shielding sheet, was needed for the network sheet as equipment to which aeration is urged, and an elastic mesh material list in elegance, the production process became complicated, time and effort was taken, the manufacturing cost was skyrocketed, and it was not the thing which can never be satisfied also in design -- moreover, network-TO is discovered from the exterior of a sole.

[0005] Therefore, this invention makes it a technical technical problem to offer the sole which can acquire the effective aeration effectiveness by the simplest possible production process.

[0006]

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, this invention person came to offer invention which has the following configurations, as a result of inquiring wholeheartedly. This invention consists of a sole body which comes to prepare one piece or two or more through tubes in a heel, and this plate-like part material that covers the top-face side of said through

tube. Namely, this plate-like part material When it comes to puncture the pars intermedia of the longitudinal direction of the slot of one articles or two or more articles, and this slot a bore at the inferior-surface-of-tongue side and this plate-like part material is laid on the through tube of a sole body, the opening location of the bore of this plate-like part material, The up opening location of the through tube of a sole body has been shifted and arranged to the cross direction, and it adopted having formed the airstream path bypassed to \*\*\*\* of the through tube of a heel, and the slot of plate-like part material as the 1st technical means.

[0007] Furthermore, if this invention was in said plate-like part material which prepared the slot of two or more articles, having drilled the bore which intersects each slot in the pars intermedia of the longitudinal direction of the slot of two or more articles arranged in parallel, and connects this each slot was used for it as the 2nd technical means. Furthermore, \*\*\*\*\* which carried out arrangement formation of the aeration tarpaulin which covers the bore of said plate-like part material was used for this invention as the 3rd technical means.

[0008] Furthermore, having carried out arrangement formation of the cushion layer which is from the good synthetic-resin product of stability or a natural fiber on the top-face side of said plate-like part material was used for this invention as the 4th technical means.

[0009]

[Function] When according to this invention it considers as the structure which prepared the bore in the pars intermedia of the longitudinal direction of a slot and this slot and this plate-like part material is especially laid on the through tube of a sole body at plate-like part material, the opening location of the bore of this plate-like part material, By shifting and arranging the up opening location of the through tube of a sole body to a cross direction, the configuration which forms the air circulation which detours to the joint of the through tube of a heel and the slot of plate-like part material, and nothing and the open air are sent in a shoes upper from said airstream path. That is, since it is the configuration which adopts the open air in an upper from the airstream path which the direct open air was not circulated and was detoured from the through tube prepared in \*\*\*\*, from the first, also in the object for \*\* in case of rainy weather, inhibition of permeation of a fine gravel or a foreign matter prevents direct permeation of waterdrop, and takes effect an effective aeration operation.

[0010]

[Example] The example of this invention is explained according to a drawing below. Drawing 1 is the top view showing the top-face side of the sole body 1 of the aeration sole of this invention, a crosspiece 7 is separated to the heel and the through tube 3 is formed in it. Furthermore, the notch 13 which fits in the plate-like part material 4 which covers this through tube 3 is formed. The through tube 3 shown in drawing 1 separates the crosspiece 7 which crosses the center of the heel right and left, and is making with two through tubes 3. Moreover, a through tube 3 is \*\*\*\*(ed) in the shape of breadth at last toward a ground plane, and has taken in the inflow of the open air efficiently. Moreover, the stepped part 11 is formed in the junction edge with the plate-like part material 4 so that the plate-like part material 4 may be stabilized and restored to a notch 13. Under the present circumstances, the number of the through tubes 3 drilled in a heel may be one, and they may be formed and are not restricted to that number at all.

[ two or more ] In addition, the crosspiece 7 formed by separating a through tube 3 is formed in the direction of a tiptoe which separated the through tube 3, when the number of through tubes 3 is one.

[0011] Drawing 2 is the perspective view showing the plate-like part material 4 which covers said through tube 3, and the bore 6 which has an opening configuration smaller than this slot 5 is drilled in the slot 5 attached to the through tube 3 of said sole body 1, and the upper part of the depression 5 of each at this plate-like part material 4. Although the slot 5 of three articles and the bore 6 are formed, the plate-like part material 4 shown in drawing 2 is not limited to this at all, and can also form the starting slot 5 and bore 6 in a single or two or more articles. Moreover, as plate-like part material 4, natural rubber and synthetic rubber are begun and it is formed in synthetic resin and also a metal thing. moreover, if it is in natural rubber, synthetic rubber, synthetic resin, and \*\*, what was colored and painted is used for the member of transparence, or this. Moreover, the configuration of the starting plate-like part material 4 and magnitude are suitably formed according to the heel configuration of the sole

body 1, and size.

[0012] Drawing 3 is the cross-section schematic drawing showing the condition of having installed the plate-like part material 4 on the through tube 3, and when this is laid on said through tube 3, the plate-like part material 4 carries out arrangement formation so that this bore 6 may be located in right above [ of the crosspiece 7 formed of the through tube 3 of a heel 2 ], and comes to form the airstream path 8 between \*\*\*\* 2 and the plate-like part material 4. That is, by having not arranged near right above [ of the through tube 3 formed in the heel of the sole body 1 ], but having arranged the location of the through tube 3 of a heel, and the bore 6 of the plate-like part material 4 into the part interrupted by the crosspiece 7, the bore 6 prepared in the starting plate-like part material 4 is formed so that the airstream path 8 may detour. When the location of opening X-X of the bore of this plate-like part material and up opening Y-Y of the through tube of a sole body shifts to a cross direction, it enables it to form the airstream path bypassed to the joint of the through tube of a heel, and the slot of plate-like part material, when this plate-like part material is laid on the through tube of a sole body in short.

[0013] That is, forming the airstream path 8 detoured in this way prevents direct permeation of the foreign matter from a heel, and it is due to the intention which is going to circulate only the open air efficiently. Therefore, the width of face of the gap of the airstream path 8 and magnitude are suitably adopted in consideration of inhibition of foreign matter permeation, and the inflow of the open air. In addition, the coupling means of daily use according [ the attachment to the sole body 1 of the plate-like part material 4 ] to adhesives is used.

[0014] What drilled the bore 6 which drawing 4 shows the plate-like part material 4 of a correction mold, and intersects each slot 5.5 in the pars intermedia of the longitudinal direction of the slot 5 on the plurality arranged in parallel, and connects this each slot 5.5 is shown. Under the present circumstances, a bore 6 connects each slots 5 and 5, and since the open air which flowed from each slots 5 and 5 is concentrated to a piece place and it sends out in a shoes upper, it is formed in big aperture.

[0015] Drawing 5 shows the configuration which covered the aeration tarpaulin 9 on the bore 6 prepared in the plate-like part material 4. As a poured aeration tarpaulin 9, although it lets air pass, sheets which do not pass moisture, such as GOATEKKUSU [a trademark] which overly has a detailed bore innumerable, are used, for example. If it does in this way, permeation of moisture can be prevented to permeation and coincidence of the foreign matter from a sole.

[0016] Furthermore, drawing 6 shows what carried out arrangement formation of the cushion layer 10 which formed in the sole mold the elastic mesh material which circulates the open air from a heel to the whole sole, and which is the example of the correction mold collected and boiled and bundled the good plastic fiber of stability spral on said plate-like part material 4. Since cushion layer 10 the very thing is spral elastic mesh material by having formed such a cushion layer 10, the air which flowed from the heel can be extensively crossed to the whole sole, and can be made to flow into it according to the contraction operation produced by walk actuation at the time of shoes wear. Moreover, by having made the cushion layer 10 intervene, the synergistic effect that the impact to a sole can be eased is also expectable.

[0017]

[Effect of the Invention] Therefore, according to this invention, since the open air can be adopted effective in the interior of shoes and MURE in a shoes upper can be prevented by the airstream path formed by the through tube prepared in the heel, the depression established in plate-like part material, and the bore, without allowing permeation of a foreign matter, it is the the best for the gentleman shoes which have a sole made of synthetic resin.

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MEANS

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[Means for Solving the Problem] In order to solve the above-mentioned technical problem, this invention person came to offer invention which has the following configurations, as a result of inquiring wholeheartedly. This invention consists of a sole body which comes to prepare one piece or two or more through tubes in a heel, and this plate-like part material that covers the top-face side of said through tube. Namely, this plate-like part material When it comes to puncture the pars intermedia of the longitudinal direction of the slot of one articles or two or more articles, and this slot a bore at the inferior-surface-of-tongue side and this plate-like part material is laid on the through tube of a sole body, the opening location of the bore of this plate-like part material, The up opening location of the through tube of a sole body has been shifted and arranged to the cross direction, and it adopted having formed the airstream path bypassed to \*\*\*\* of the through tube of a heel, and the slot of plate-like part material as the 1st technical means.

[0007] Furthermore, if this invention was in said plate-like part material which prepared the slot of two or more articles, having drilled the bore which intersects each slot in the pars intermedia of the longitudinal direction of the slot of two or more articles arranged in parallel, and connects this each slot was used for it as the 2nd technical means. Furthermore, \*\*\*\*\* which carried out arrangement formation of the aeration tarpaulin which covers the bore of said plate-like part material was used for this invention as the 3rd technical means.

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OPERATION

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EXAMPLE

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[Example] The example of this invention is explained according to a drawing below. Drawing 1 is the top view showing the top-face side of the sole body 1 of the aeration sole of this invention, a crosspiece 7 is separated to the heel and the through tube 3 is formed in it. Furthermore, the notch 13 which fits in the plate-like part material 4 which covers this through tube 3 is formed. The through tube 3 shown in drawing 1 separates the crosspiece 7 which crosses the center of the heel right and left, and is making with two through tubes 3. Moreover, a through tube 3 is \*\*\*\*(ed) in the shape of breadth at last toward a ground plane, and has taken in the inflow of the open air efficiently. Moreover, the stepped part 11 is formed in the junction edge with the plate-like part material 4 so that the plate-like part material 4 may be stabilized and restored to a notch 13. Under the present circumstances, the number of the through tubes 3 drilled in a heel may be one, and they may be formed and are not restricted to that number at all.

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[0013] That is, forming the airstream path 8 detoured in this way prevents direct permeation of the foreign matter from a heel, and it is due to the intention which is going to circulate only the open air efficiently. Therefore, the width of face of the gap of the airstream path 8 and magnitude are suitably

adopted in consideration of inhibition of foreign matter permeation, and the inflow of the open air. In addition, the coupling means of daily use according [ the attachment to the sole body 1 of the plate-like part material 4 ] to adhesives is used.

[0014] What drilled the bore 6 which drawing 4 shows the plate-like part material 4 of a correction mold, and intersects each slot 5.5 in the pars intermedia of the longitudinal direction of the slot 5 on the plurality arranged in parallel, and connects this each slot 5.5 is shown. Under the present circumstances, a bore 6 connects each slots 5 and 5, and since the open air which flowed from each slots 5 and 5 is concentrated to a piece place and it sends out in a shoes upper, it is formed in big aperture.

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CLAIMS

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[Claim(s)]

[Claim 1] It consists of a sole body 1 which comes to prepare one piece or two or more through tubes 3 in a heel 2, and plate-like part material 4 which covers the top-face side of said through tube 3. This plate-like part material 4 When it comes to puncture the pars intermedia of the longitudinal direction of the slot 5 of one articles or two or more articles, and this slot 5 a bore 6 at the inferior-surface-of-tongue 12 side and this plate-like part material 4 is laid on the through tube 3 of the sole body 1, opening X-X of the bore 6 of this plate-like part material 4, The aeration sole characterized by forming the airstream path 8 which shifts and arranges up opening Y-Y of the through tube 3 of the sole body 1 to a cross direction, and is bypassed to the joint of the through tube 3 of a heel 2, and the slot 5 of the plate-like part material 4.

[Claim 2] The aeration sole characterized by drilling the bore 6 which intersects each slots 5 and 5 in claim 1 term in the pars intermedia of the longitudinal direction of the slots 5 and 5 on the plurality arranged in parallel, and connects these each slots 5 and 5.

[Claim 3] The aeration sole characterized by carrying out arrangement formation of the aeration tarpaulin 9 which covers a bore 6 to the top-face side of said plate-like part material 4 in claim 1 term.

[Claim 4] The aeration sole characterized by carrying out arrangement formation of the cushion layer 10 which is from the good synthetic-resin product of stability, or a natural fiber on the top-face side of said plate-like part material 4 in claim 1 term.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the top view showing the top-face side of the sole body of this invention.

[Drawing 2] It is the expansion perspective view showing the plate-like part material of this invention.

[Drawing 3] It is the cross-section schematic drawing showing the aeration sole of this invention.

[Drawing 4] It is the top view showing other examples of the plate-like part material concerning this invention.

[Drawing 5] It is the cross-section schematic drawing showing other examples of the aeration sole concerning this invention.

[Drawing 6] It is the cross-section schematic drawing showing other examples of the aeration sole concerning this invention.

[Description of Notations]

- 1 Sole Body
- 2 Heel
- 3 Through Tube
- 4 Plate-like Part Material
- 5 Slot
- 6 Bore
- 7 Crosspiece
- 8 Airstream Path
- 9 Aeration Tarpaulin
- 10 Cushion Layer
- 11 Stepped Part
- 12 Inferior Surface of Tongue of Plate-like Part Material
- 13 Notch

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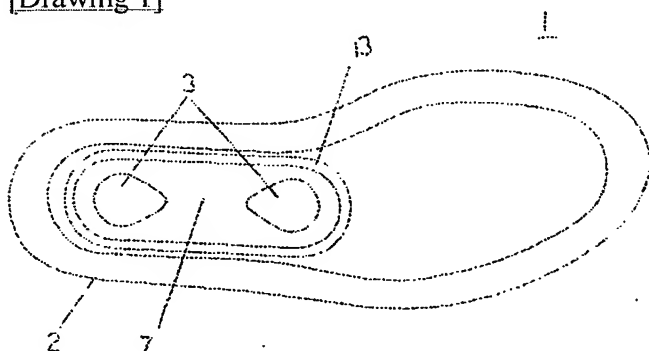
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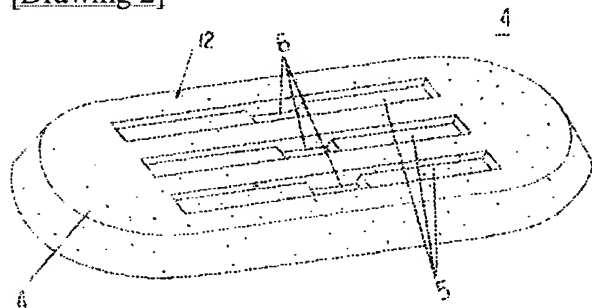
DRAWINGS

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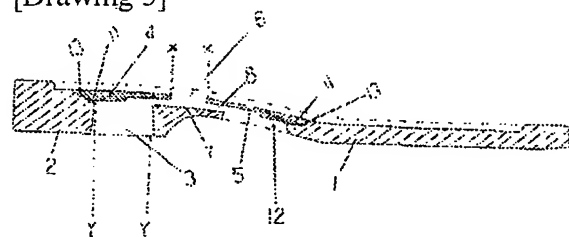
[Drawing 1]



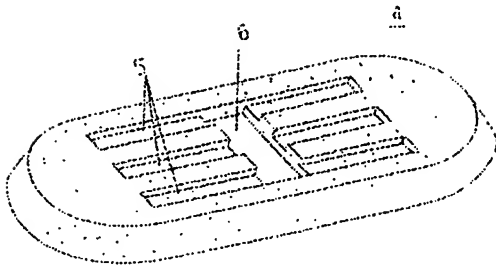
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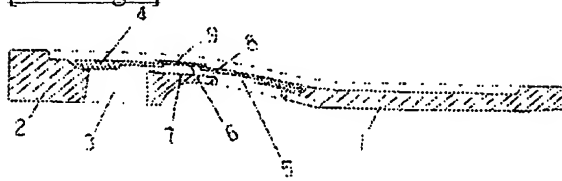
[Drawing 3]



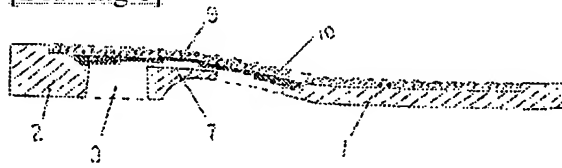
[Drawing 4]



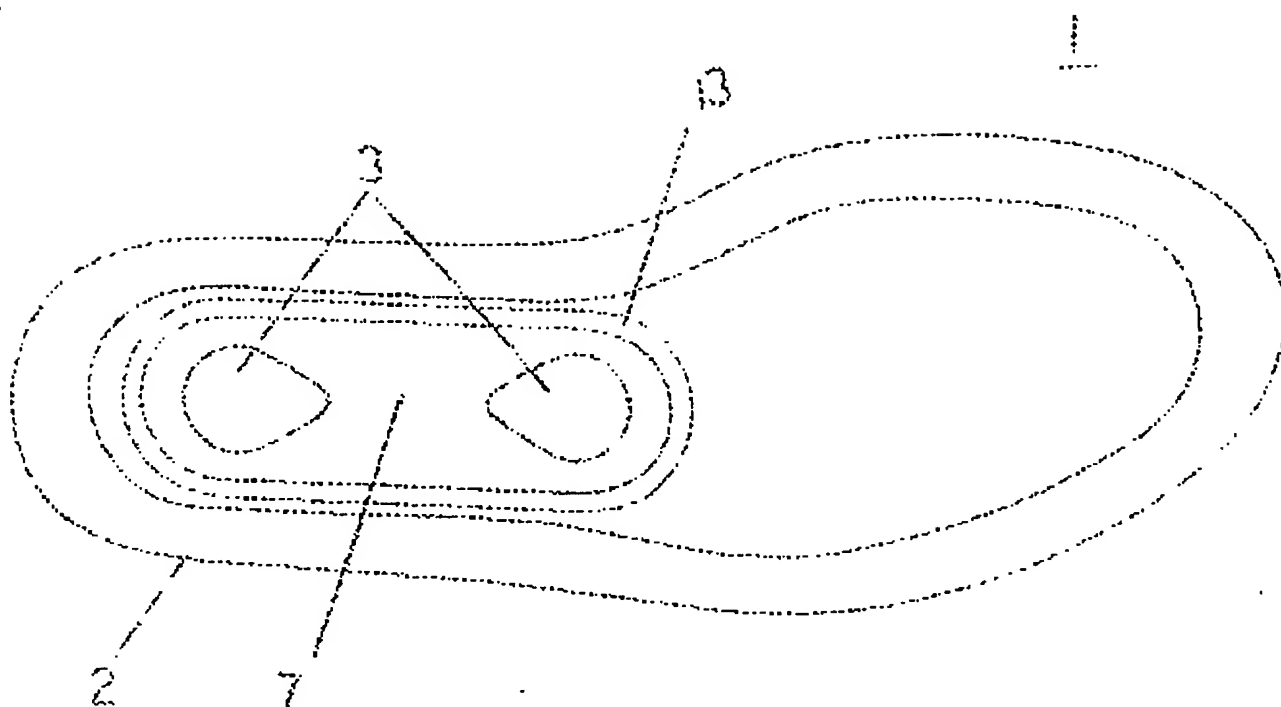
[Drawing 5]

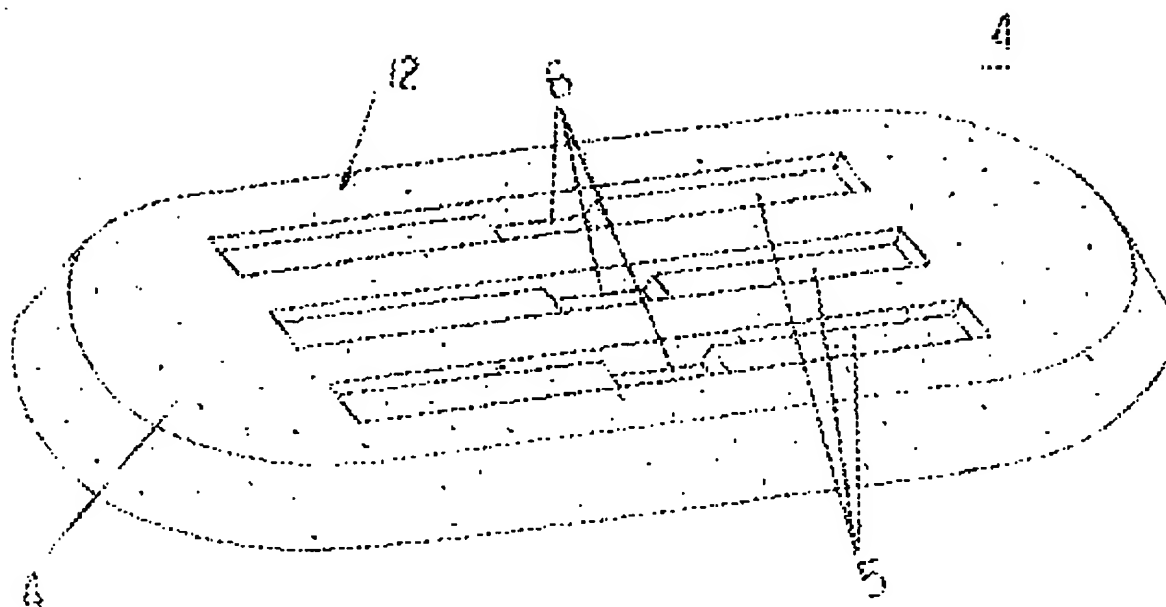


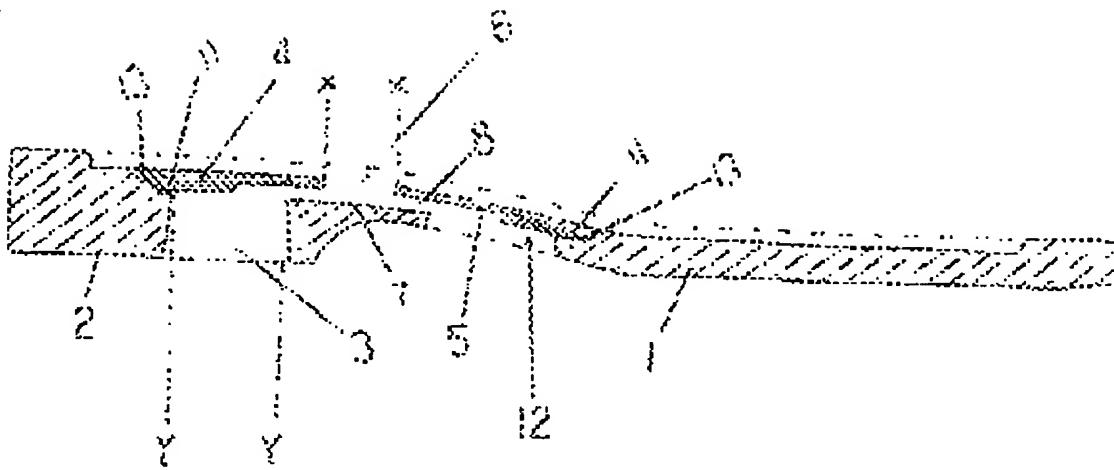
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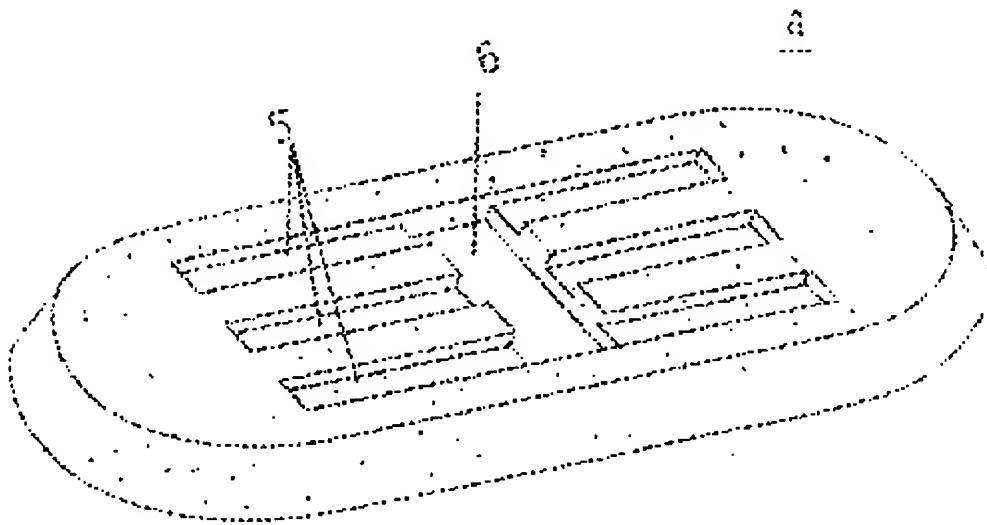


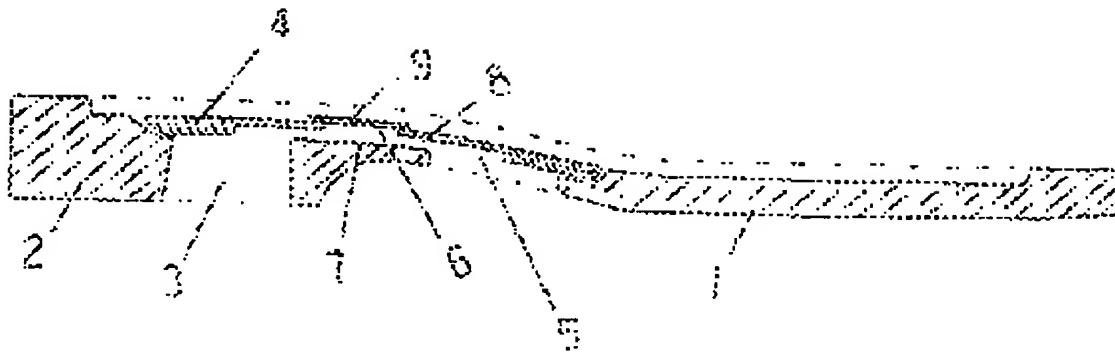
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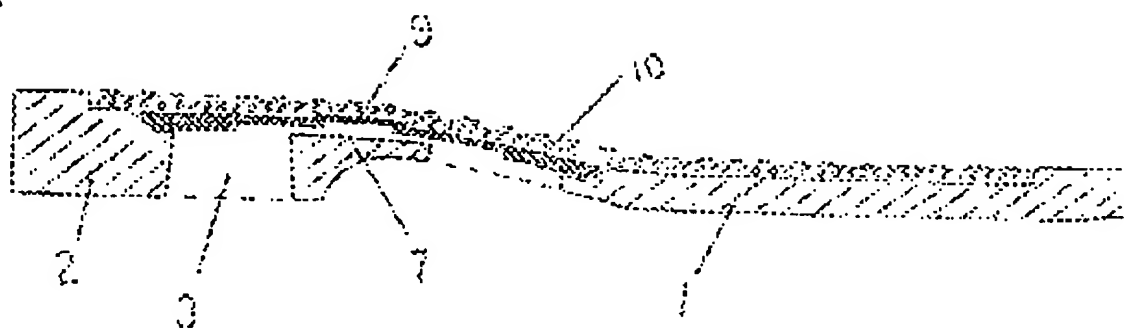












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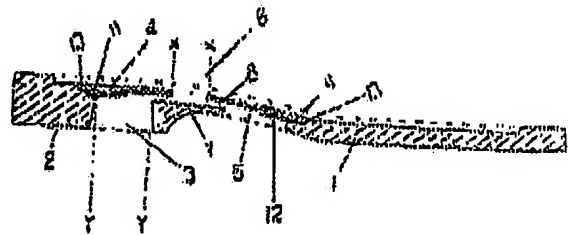
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(54) 【発明の名称】 通気靴底

(57) 【要約】

【目的】 通気性を有する靴底の改良にかかり、靴の踵部から外気を靴甲被内に効率的に取り入れ、足のムレ防止を有効に働かせることのできる靴底を提供する。

【構成】 踵部2に1個若しくは複数個の貫通孔3を設けてなる靴底本体1と、前記貫通孔3の上両側を被覆する板状部材4とからなり、該板状部材4は、その下面12側に1条若しくは複数条の溝5及び該溝5の長手方向の中間部に透孔6を穿設してなり、該板状部材4を靴底本体1の貫通孔3上に載置した際、該板状部材4の透孔6の開口X-Xと、靴底本体1の貫通孔の上部開口Y-Yとを前後方向にずらして配置し、踵部2の貫通孔3と板状部材4の溝5との接合部に迂回する空気流通路8を形成した。



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